UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
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August 28, 2017

Derek J. Robinson, BRAC Environmental Coordinator
Department of the Navy
Base Realignment and Closure Program Management Office West
33000 Nixie Way, Building 50
San Diego, CA 92147

Re: EPA Comments on the *Draft Work Plan, Sediment Investigation and Bathymetric Survey for Parcel F, Hunters Point Naval Shipyard, San Francisco, California, June 2017*

Dear Mr. Robinson:

Attached are EPA's comments on the *Revised Draft Work Plan, Sediment Investigation and Bathymetric Survey for Parcel F, Hunters Point Naval Shipyard, San Francisco, California,* dated June 2017.

If you have any questions, please do not hesitate to call me at (415) 972-3681 or e-mail me at huang.judy@epa.gov.

Sincerely,

Judy C. Huang, P.E.
Remedial Project Manager

cc:

Nina Bacey, DTSC (via email)
Tina Ures, RWQCB (via email)
Amy Brownell, SFDPH (via email)
Chris Ota, US Navy (via email)
Danielle Janda, US Navy (via email)

Review of the Draft Work Plan,
Sediment Investigation and Bathymetric Survey for Parcel F
Hunters Point Naval Shipyard, San Francisco, California, June 2017

General Comments

1. Since this is a data gap study, it is unclear why the work plan:
    a. limited the analysis to the three constituents of concerns (COCs) in the Parcel F Record of Decision (copper, mercury, and PCBs) instead of using the entire list of metals commonly found at Hunters Point Naval Shipyard and PCBs
    b. only proposed to collect surface sediment instead of investigating the contamination to depth. Please provide a basis why only surface sediment investigation is proposed.

2. In each area, the Workplan proposes to collect numbers of subsamples to be composite into one. Please provide the rational for the number of sub samples indicated for each area and why a composite sample is adequate.

3. The Sampling and Analysis Plan (SAP) in Appendix A presents inconsistent information for the collection of field duplicates. Worksheet #12 states that field duplicates will not be collected because sediment sampling is heterogeneous and also references the nature of the composite sampling. However, duplicate samples of both the discrete and the composite samples should be collected to document the observed heterogeneity. Further, Worksheet #37 states that field sampling precision will be evaluated through the analysis of field duplicates, which will be collected at a frequency of 10 percent. It is unclear how field sampling precision will be assessed if field duplicates are not collected. Please revise the SAP to consistently include the analysis of field duplicates.

4. SAP Worksheet #20 indicates a field blank will be collected, but Worksheet #12 does not include field blanks. Please revise the SAP to clarify if a field blank will be collected and if so, provide the measurement performance criteria in Worksheet #12.

5. SAP Attachment A1-2, Laboratory Standard Operating Procedures (SOPs), does not include the SOP for mercury analyses by the latest version of Method 7471 as identified in Worksheet #23. In addition, Worksheet #23 does not list the metals solid sample digestion SOP (MET 2.4) and subsampling and compositing SOP (CS 2.3) provided in Attachment A1-2. Please revise Attachment A1-2 and Worksheet #23 to consistently provide and identify the laboratory SOPs to be used for this project.

6. The data management information in the SAP does not include sufficient information regarding the procedures that will be used to document and archive the project records and electronic data. For example, it is unclear what information will be included in the laboratory reports and data validation reports (DVRs) identified in Worksheets #29 and #34-36. In addition, it is unclear where hard copy project documents and electronic files will be archived and the length of time that these files will be archived before disposal. Please revise the SAP to specify the information that will be included in the laboratory reports (e.g., quality control [QC] results, raw data, etc.) and DVRs (e.g., the QC parameters evaluated, the acceptance criteria used to evaluate each QC parameter, a list

of all QC exceedances as well as the extent of the exceedance, the samples associated with each exceedance, and the qualifiers applied). Please also include the procedures for archiving all project records and files.

7. Insufficient information is provided for the data validation to be performed on the results. Worksheet #11 indicates that 80 percent of the results will be validated at Level 3 and 20 percent of the results will be validated at Level 4, but the SAP does not specify what will be included in each level of validation. In addition, Worksheet #11 indicates data validation will be performed using EWI No. 1, the SAP, EPA National Functional Guidelines (NFG) for Superfund Organic Methods Data Review and for Inorganic Superfund Data Review, and the Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use. However, Worksheets #34-#36 indicate the SAP and the Department of Defense Quality Systems Manual (DoD QSM), Version 5.1 will be used. The SAP should clearly define the specific procedures that will be used to apply qualifiers for QC exceedances (e.g., when results will be qualified estimated/rejected and if individual or all samples in a batch will be qualified). These procedures can be defined in tables or validation checklists. Please revise the SAP to specify what is included in Levels 3 and 4 validation and to provide data validation procedures for each method.

8. Note 1 in Worksheet #18 states that every fifth sample will be validated at Level 4, but only six composite samples are proposed to be collected. Therefore, it is unclear if only the fifth sample (i.e., 16 percent of the samples) will be validated at Level 4, or if results for two samples will be validated at this level (i.e., 33 percent of the samples) to meet the 20 percent requirement indicated elsewhere in the SAP. Please clarify the number of samples to be validated at Level 4.

Specific Comments:

1. **Section 2.5, Current Conceptual Site Model, Page 2-2:** This section referred to the conceptual site model figures in the Feasibility Study and the Feasibility Study addendum. Please include these conceptual site model figures in the report.

2. **Section 2.5.2, Contaminant Extent and Distribution in Area III, Page 2-4:** According to the third paragraph of Section 2.5.2, lead exceeded ambient threshold levels in sediment, but the Work Plan does not include analysis of lead for the proposed sediment samples. Lead was a constituent of paint, so spent sandblast grit that was discharged to San Francisco Bay could have high concentrations of lead. Please revise the Work Plan to include analysis of lead in the proposed sediment samples. Alternatively, please revise the Work Plan to explain why samples will not be analyzed for lead.

3. **Section 3.1, Bathymetric Surveys, Page 3-1:** The last sentence on page 3-1 states that water surface elevations "will be checked against a tide board or real-time tide gauge," but the Work Plan provides no criteria for deciding which source to use for this check. Please revise Section 3.1 to include criteria for determining whether a tide board or real-time tide gauge will be used to check against water surface elevations.

4. **Section 3.1, Bathymetric Surveys, Page 3-1 and Appendix A, Worksheet #17, Sampling Design and Rationale, Page 36 of 70:** Section 3.1 and Worksheet #17 indicate that survey lines will be spaced approximately 100 feet apart, but the text does not discuss whether this spacing will provide complete coverage. Survey line spacing should be selected to provide complete survey coverage, depending on the equipment used and the water depth. Please revise the Work Plan to discuss how the survey line spacing was selected and to ensure spacing is selected to provide complete coverage.

5. **Section 3.1.2, Single-Beam Survey System, Page 3-2 and Appendix A, Worksheet #17, Sampling Design and Rationale, Page 36 of 70:** Section 3.1.2 and Worksheet #17 indicate that the single-beam echo sounder used for the bathymetric survey in Area IX/X collects data "below the vessel;" however, the deeper the water the wider the mapped area will be. The South Basin (Area IX/X) is very shallow, so it is unclear how wide a strip of sediment will be mapped using this procedure. For example, if the single-beam echo sounder only maps a strip 20 feet wide in shallow water, then the 100-foot spacing for the survey lines is too large to provide complete coverage. Please revise the Work Plan to clarify the size of the strip of sediment that will be mapped in Area IX/X using the single-beam echo sounder. Please also discuss whether the 100-foot survey spacing is appropriate given the shallow depth of South Basin.

6. **Section 3.2, Sediment Sampling, Page 3-3:** This section states that "[t]he proposed sampling density and approach exceeds the procedures developed by the San Francisco Bay Regional Water Quality Control Board (Water Board, 2000) for testing of dredged materials for determining the suitability sediments for beneficial reuse." Please clarify why the Water Board's guidance for sediment beneficial reuse is relevant and applicable to sediment investigation at Hunters Point Shipyard.

7. **Section 3.2, Sediment Sampling, Page 3-4 and Appendix A, Worksheet #19, Field Sampling Requirements, Page 39 of 70:** Section 3.2 specifies Method 6010 for analysis of copper and Method 7471 for analysis of mercury, while Worksheet #19 specifies Method 6020 for analysis of copper and Method 7471A for analysis of mercury. Please revise the Work Plan to consistently identify the methods for each analyte.

8. **Section 3.2, Sediment Sampling, Page 3-5; Appendix A, Worksheet #11, Project Quality Objectives/systematic Planning Process Statements, Page 23 of 70; and Appendix A, Worksheet #17, Sampling Design and Rationale, Pages 36 of 70 and 37 of 70:** The second to last paragraph of Section 3.5 states that "If composite sediment sample COC [contaminant of concern] concentrations from any former pier area exceed the PRGs [preliminary remediation goals], then individual sub-samples placed on hold in the laboratory for that area, will be analyzed for the Area III COCs;" however, the text does not clearly indicate whether some or all of the individual sub-samples for a given area will be analyzed. If some will be analyzed, then the text should explain how the individual sub-samples will be selected for analysis. In addition, the text does not specify whether individual sub-samples will be analyzed for the same constituents as the composite samples or only those constituents exceeding PRGs (e.g., just metals or just polychlorinated biphenyls [PCBs], etc.). Similarly, Worksheets #11 and #17 indicate that individual sub-samples will be analyzed if COC concentrations exceed PRGs, but does

not clearly indicate whether some or all of the individual sub-samples for a given area will be analyzed and does not specify the constituents that will be analyzed (i.e., all of the COCs or only the one with the exceedence). In addition, the Work Plan should specify a timeline to ensure that individual sub-samples are analyzed within holding times. For example, the holding time for analysis of mercury is 28 days, so if individual sub-samples are analyzed for mercury, subsample analysis must occur within 28 days from sample collection. Please revise the Work Plan to clarify whether some or all of the individual sub-samples for a given area will be analyzed if PRGs are exceeded. Please also revise the Work Plan to clarify whether individual sub-samples will be analyzed for the same constituents as the composite samples or only those constituents exceeding PRGs. Please also revise the Work Plan to specify the timeline for analysis of individual sub-samples to ensure analysis occurs within applicable holding times.

9. **Appendix A, Worksheet #11, Project Objectives/Systematic Planning Process Statements, Table 11-1, Information Inputs, Page 21 of 70:** Table 11-1 includes bathymetric surveys for Area III and Area IX/X, but the area adjacent to the former piers as depicted on Figure 3-1 is not listed. Please revise Table 11-1 to include the bathymetric survey in the area adjacent to the former piers.

10. **Appendix A, Worksheet #11, Project Quality Objectives/Systematic Planning Process Statements, Pages 21 of 70 through 24 of 70:** The data quality objectives (DQOs) should include additional detail for both the bathymetric survey and the sediment sampling. For example, Steps 1 and 2 do not include the bathymetric survey, but Worksheet #10 indicates a study goal is to determine whether erosional and bathymetric changes have occurred within Parcel F. In addition, Step 4 indicates the lateral boundaries of the study are the survey and sampling areas, but it is unclear how these areas were determined. Please revise the DQOs to include the bathymetric survey in each step and to clarify how the proposed sampling and survey plans were determined to meet these project goals.

11. **Appendix A, Worksheet#16, Project Schedule/Timeline Table, Page 35 of 70:** The schedule should include entries for analyzing the samples and validating the results, as well as reanalysis of the discrete samples if project action limits (PALs) for the composite samples are exceeded. This will ensure there is sufficient time to complete the reanalysis of the discrete samples within the sample holding times (e.g., 28 days for mercury). Please revise the schedule to include the analysis and validation timeframes, and ensure there is sufficient time for the reanalysis of the discrete samples if the composite samples exceed PALs.

12. **Appendix A, Worksheet #17, Sampling Design and Rationale, Page 36 of 70:** Worksheet #17 specifies that the bathymetric survey lines will be approximately 100 feet apart, but does not provide the rationale for why this spacing is sufficient to achieve project goals. Please revise Worksheet #17 to provide the rationale for the spacing of the bathymetric survey lines.

13. **Appendix A, Worksheet #17, Sampling Design and Rationale, Pages 36 of 70 and 37 of 70:** Worksheet #17 states that "At each former pier area, individual sub-samples will

be collected for the composite at a rate of one sub-sample per 4,000 sf [square feet]," but does not provide the rationale for why this sampling rate is sufficient to meet project goals. Please revise Worksheet #17 to provide the rationale for the sampling frequency.

14. **Appendix A, Worksheet #18-1, Location-Specific Sampling Methods/SOP Requirements Table for Sediment Sampling, Page 38 of 70:** Worksheet #18-1 provides the sample identification (ID) number for the composite sample, but there are no sample ID numbers provided for the individual sub-samples. The individual sub-samples are to be retained by the laboratory for potential analysis, and therefore should have sample ID numbers. Please revise Worksheet #18-1 to include sample ID numbers for the individual sub-samples.

15. **Appendix A, Worksheet #18-1, Location-Specific Sampling Methods/SOP Requirements Table for Sediment Sampling, Page 38 of 70:** According to the second note of Worksheet #18-1, "Depth below surface of water will vary, and be noted in the field during sampling;" however, the Work Plan does not specify the potential sample depth range that can be achieved with the Van Veen grab sampler. In addition, the Work Plan does not specify how the sample depth will be determined in the field. Please revise the Work Plan to specify the potential sample depth range that can be achieved with the Van Veen grab sampler and to describe how the sample depth will be determined in the field.

16. **Appendix A, Worksheet #19, Field Sampling Requirements, Page 39 of 70:** The preservation requirements for mercury analyses do not specify that samples will be kept cool. The latest version of Method 7471 indicates that solid samples should be refrigerated to less than 6 degrees Celsius. Please revise this table to indicate that solid samples for analyses of mercury will be cooled.

17. **Appendix A, Worksheet #22, Field Equipment Calibration, Maintenance, Testing, and Inspection Table, Page 43 of 70:** Worksheet #14 indicates a boat-mounted global positioning system (GPS) unit will be used to mark the sediment locations, but this table does not include the GPS. Please revise Worksheet #22 to include the GPS and the necessary accuracy for this measurement.

18. **Appendix A, Worksheet #28, Laboratory QC Samples Tables, Pages 54, 56, and 58 of 70:** Control limits for the proposed analytes are provided, but the source of these limits is not identified. It appears that several of the limits are from the DoD QSM, but it is unclear if laboratory limits are also provided. Please note that laboratory QC limits should be provided for all analytes to ensure the measurement performance criteria can be met. Please clarify the source of the control limits for each analyte, and ensure the laboratory limits for all analytes are provided.

19. **Appendix A, Worksheet #28, Laboratory QC Samples Tables, Pages 53 to 54 of 70:** The corrective action for the Method 6020 matrix spike/matrix spike duplicate (MS/MSD) should indicate that the post-digestion spike (PDS) will be analyzed when the MS/MSD fails to meet acceptance criteria. Please revise the corrective action for the

MS/MSD to indicate that a PDS will be analyzed when the MS/MSD are outside the acceptance limits.

20. **Appendix A, Worksheet #28, Laboratory QC Samples Tables, Pages 57 to 58 of 70:** Second column confirmation is missing from this table. As noted in the laboratory SOP SVOC 3.2, Section 9.5, the laboratory uses second-column confirmations for all samples and reports the higher of the two detected results from the columns. Please revise this table to include second-column confirmation for detections of PCBs.

21. **Appendix A, Worksheet #37, Usability Assessment, Pages 67 to 69 of 70:** This worksheet indicates a data usability assessment report will be generated to discuss the findings of the data evaluations, but does not specify what will be included in this report. For example, the data usability assessment report should include a detailed description of how precision, accuracy, representativeness, completeness, comparability, and sensitivity (PARCCS) were evaluated for the project data and QC results and provide sufficient information to support the data usability conclusions. In addition, significant trends and biases in the QC results should be evaluated and discussed in this report. Please revise the SAP to indicate that the data usability assessment report will include detailed discussions of the data usability evaluations (e.g., PARCCS, trends and biases), along with sufficient information to support the data usability conclusions.

22. **Appendix B, Section 4.0, Wildlife Resources, Page 4-1:** Section 4.0 states that "If marine wildlife is spotted during offshore activities, work in the vicinity of the wildlife will be postponed, to the extent practicable, until wildlife is a safe distance from the vessel;" however, the text does not specify the distance that qualifies as "safe." In addition, Section 4.0 does not specify how a safe distance will be managed (e.g., a spotter will be assigned to watch for marine wildlife, periodic observations will be made, etc.). Please revise Section 4.0 of Appendix B to specify the "safe distance" for working in the vicinity of marine wildlife. Please also revise Section 4.0 to specify how the safe distance will be managed.